Amendments to the Claims

Please **delete** claims 2, 7 and 16. Please **amend** claims 1 and 16.

1. (Currently Amended) Apparatus for reading or writing data markings of an optical recording medium having data markings arranged along a track and header markings arranged laterally offset with respect to the ~~centre~~ center of the track, and an intermediate track being arranged between two adjacent tracks, the apparatus comprising:

a header identification unit comprising a high frequency path, a low-frequency path and a signal detector, and having a track error signal applied to it;

a header sequence detector for detecting a sequence of said laterally offset header markings;

a track crossing detector; and

an intermediate track detector for generating an intermediate track signal, wherein the intermediate track detector is connected to outputs of the header identification unit, of the track crossing detector and of the header sequence detector.

2. (Cancelled).

3. (Previously Presented) Apparatus according to claim 1, wherein the header sequence detector comprises envelope detectors, to which a track error signal is fed, and has outputs connected to a comparator.

4. (Previously Presented) Apparatus according to claim 1, wherein the header sequence detector has a phase detector, which is fed with signals derived from detector elements of a multi-zone detector of the apparatus.

5. (Previously Presented) Apparatus according to claim 1, wherein the track crossing detector has a track error signal applied to it, and comprises one of a phase shifter and a peak value detector.

6. (Previously Presented) Apparatus according to Claim 5, wherein the track crossing detector comprises at least two peak value detectors, which are connected as extreme value detectors.

7. (Cancelled).

8. (Previously Presented) Apparatus according to Claim 1, further comprising a validity detector for outputting a validity signal, and a track crossing frequency detector for supplying a track cross signal to the validity detector.

9. (Previously Presented) Apparatus according to claim 8, wherein the header identification unit comprises a high-frequency path, a low-frequency path and a signal detector, and a track error signal is applied to the header identification unit.

10. (Previously Presented) Apparatus according to claim 8, wherein the header sequence detector comprises envelope detectors, to which a track error signal is fed, and has outputs connected to a comparator.

11. (Previously Presented) Apparatus according to claim 8, wherein the header sequence detector has a phase detector, which is fed with signals derived from detector elements of a multi-zone detector of the apparatus.

12. (Previously Presented) Apparatus according to claim 8, wherein the track crossing detector has a track error signal applied thereto, and comprises one of a phase shifter and a peak value detector.

13. (Previously Presented) Apparatus according to Claim 12, wherein the track crossing detector comprises at least two peak value detectors, which are connected as extreme value detectors.

14. (Previously Presented) Apparatus according to claim 8, wherein the header identification unit evaluates a summation signal of the detector signals.

15. (Currently Amended) Method for generating an intermediate track signal in an apparatus for reading or writing data markings of an optical recording medium having data markings arranged along a track and header area containing one or more header markings arranged with alateral offset with respect to the ~~centre~~ center of the track, and an intermediate track being arranged between two adjacent tracks, comprising the steps of

- checking a signal derived from detector elements of the apparatus for the presence of signal components which indicate the lateral offset of said header markings,
- if the signal components are present, determining succession information about the signal components originating from differently arranged header markings within the header areas,
- generating a signal corresponding to a track crossing frequency,
- generating the intermediate track signal from the succession information and the signal corresponding to the track crossing frequency,
- detecting the track crossing frequency, and, if a limit value is undershot, generating an invalidity signal, which is cancelled only when signal components which are typical of header areas are present once again.

16. (Cancelled).